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ABSTRACT

A study on the needs for articulation between Iowa secondary and postsecondary vocational agriculture programs was done (1) to determine the importance of selected activities in promoting articulation, (2) to determine the extent that these activities have been implemented, and (3) to identify priority articulation activities. A questionnaire was developed which included forty-five articulation activities and required that each activity be rated as to its importance in articulation and level of implementation. Utilizing this questionnaire, 222 Iowa secondary and 44 postsecondary agricultural educators attending a state conference were surveyed. The findings included the following: (1) that periodic revision of the agriculture curriculum to keep current with changing technology should be a priority activity, (2) that postsecondary school instructors are more concerned than high school instructors about conducting activities which promote articulation, and (3) that postsecondary school instructors perceive that articulation activities are being conducted to a greater extent than the level of activity perceived by high school instructors, and that all forty-five activities were important but the greatest articulation needs concern activities relating to program entrance and exit, communication, and career guidance and counseling. (Guidelines for improving articulation between secondary and postsecondary programs in agriculture and the questionnaire are appended.) (EM)

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IDENTIFICATION OF ACTIVITIES TO ENHANCE ARTICULATION BETWEEN SECONDARY AND POSTSECONDARY VOCATIONAL AGRICULTURE PROGRAMS IN IOWA

by

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INTRODUCTION

In many states, postsecondary as well as secondary vocational education programs are sanctioned by law. These two delivery systems have developed as relatively independent systems and can be illustrated with the vocational agriculture developments in Iowa. Vocational agriculture has been an important part of the curriculum of many Iowa secondary schools since the early 1900's. In 1965, a statewide system of postsecondary education was legislated, resulting in the establishment of 15 postsecondary area schools. Thirteen have been organized as area community colleges and two have been organized as area vocational schools. Instruction in agriculture is a part of the vocational education offerings of all 15 institutions.

The addition of postsecondary vocational offerings to the public education system in Iowa typifies situations in many other states and exemplifies the need for articulation between secondary and postsecondary schools. Postsecondary vocational education is within commuting distance of the homes of many young people graduating from high school and provides a continuum of preparation for an occupation which they began at the secondary school. Recent studies (Byler 1975, and Williams and Rawls 1977) show that approximately one-fourth of the Iowa Secondary school students enrolled in vocational agriculture planned to attend an area school or community college.

The New York Education Department (1974) described the contribution that postsecondary education is making and the need for articulation as follows:

> The long-standing need for a more effective continuum of learning and more educational options for students has been made more important by the emergence of "universal access" postsecondary education and the development of a "learning society" (p. 5).

Importance of Articulation

The National Advisory Council of Vocational Education (1976) defined articulation as a planned process which facilitates the transition of students between the secondary and postsecondary levels and allows the students continuity without hindrance through levels of education. The New York Education Department (1974) urged that all institutions and groups concerned with the transition of students from secondary to postsecondary education give careful consideration to the matters of articulation.

An Illinois (Svob, 1973) pilot articulation project identified five articulation problems existing between community colleges and secondary schools: (1) the role of the community college in offering adult education programs in competition with secondary schools; (2) the need for greater uniformity in recording grades, course description, test scores, etc., on high school transcripts; (3) the need for continuous updating of information concerning community college programs and opportunities; (4) the need for greater coordination of curricula; (5) the need to define the role of the community college in providing educational programs for students with special needs.

An Oregon (1968) project charged to innovate a plan for the development and expansion of vocational education in high schools and community colleges

which would provide for articulation between the two delivery systems concluded that:

> The implementation of an articulated comprehensive agricultural occupations program which is vital to the continued success of agriculture will require that education and agriculture make a concerted effort to open the lines of communication between all levels of education. . . (p. 86).

In a discussion of unifying the system of education, Herr (1972) made the following statement:

> . . . Postsecondary programs, much like secondary programs, will need to begin where the individual is and build in systematic ways the individual experiences necessary to meeting particular interests and goals (p. 100).

Based on data collected from key state officials responsible for secondary and postsecondary occupational education programs and on data provided by state directors of vocational education to identify articulation efforts, Bender (1973) concluded that:

> Society, its legislative representatives, and professional educators have come to realize that each component unit of the educational system must be in its place, interconnected, and joined to form a true continuum. This does not mean the loss of special purpose, mission, or identity of each unit. It does mean, however, that the educational delivery system cannot have individual components going in opposite or independent directions (p. 37).

The New York Education Department (1974) advanced that educators must facilitate the individual's utilization of all resources that can contribute to his or her development and referred to such action as articulation:

> This articulation process, as in any enterprise, is never finished. Agreements and procedures need review and revision. New personnel need orientation. Communication between sectors of the educational system must be established and kept open. Educators must resist the temptation to see their own small segment of the educational field as of primary importance while depreciating those who toil in other areas of the learning enterprise (p. 17).

In a study pertaining to articulation and coordination of competencies that should be developed in distributive occupations at the secondary and postsecondary levels, Malsbary and Holmes (1969) concluded that a need exists for educators representing both levels of education to sit down and consider aspects of the problem related to education for distribution. Such a session could result in the development of plans for program articulation that would improve the preparation of students to enter and succeed in careers.

Kintzer (1972) in a review of articulation activities between postsecondary and secondary programs in California, Colorado, New York and Washington concluded:

> Articulation in education is definitely a team process - a series of complex and interlocking formal relationships between schools. . . articulation is also an attitude. . .willingness to compromise extreme positions and to tolerate the views of others is essential if transfer relationships between high schools and community colleges are to succeed (p. 3).

Evans (1971) described the desired relationship between secondary and postsecondary schools as follows:

> Ideally, the curricula of the secondary and postsecondary schools should be arranged to complement each other. Then the student who makes a decision prior to high school graduation to enter the higher levels of an occupational field could have a program which began in the high school, flowed without interruption into the community college. . . Such an integrated system of occupational education assumes a career ladder extending from the bottom to the top of an occupational field. More importantly, it assumes that instructional personnel in all levels of education have respect for each other and are willing to work together for the good of the student (p. 184).

In a report that described articulation efforts in North Carolina, Manley (1970) advanced that a well articulated educational program provides students an opportunity to develop to their highest potential in attaining their educational and career objectives.

Weinheimer (1976-77) described articulation as a necessary survival skill - a compelling lifeline - for the future of vocational education and suggested that two steps are needed in making articulation a reality:

> . . . the basic factor impacting the future development of vocational education articulation efforts resides in the individual vocational educator's sensitivity to articulation opportunities . . . The next step needed is for opportunities to become reality through commitment to action by every dedicated vocational educator (p. 68).

Objectives of the Study

The primary objective of this study was to identify needs for articulation between Iowa secondary and postsecondary vocational agriculture programs. The specific objectives were to:

1. Determine the importance of selected activities in promoting articulation.
2. Determine the extent that selected articulation activities have been implemented.
3. Identify priority activities for articulation between secondary and postsecondary vocational agriculture programs.

Methodology

This research may be classified as survey research. Borg and Gall (1971) supported the idea that survey research can be used with professional groups to not only describe "what is", but to also study relationships among groups:

> Once you have established that the professional group selected actually has access to the information you wish to obtain, you can survey the entire group or you can select a random sample from the population (p. 196-197).

Population. The population for this research was the 266 Iowa secondary and postsecondary agricultural educators who participated in the 1976 Iowa

Agriculture/Agribusiness Education Conference. The conference participants included 222 high school vocational agriculture instructors (80 per cent of all such instructors in Iowa) and 44 postsecondary vocational agriculture instructors (40 per cent of all such personnel in Iowa).

Instrumentation. A questionnaire was designed to assess the educators' perception of the importance and the level of implementation of selected activities in promoting articulation between secondary and postsecondary vocational agriculture programs. The initial articulation activities were identified by a team of educators that consisted of six postsecondary and six secondary vocational agriculture instructors from Iowa during an articulation workshop. The team was instructed to identify problems (challenges and situations) related to articulation between Iowa secondary and postsecondary vocational agriculture programs. Then, the team was directed to identify possible action steps that may help solve the problems. These action steps were referred to as articulation activities. (Results of the articulation workshop are presented as Appendix A, Guidelines for Articulation Between Secondary and Postsecondary Programs in Agriculture.)

The articulation activities were validated by a group of current and former secondary and postsecondary vocational agriculture instructors as activities which could be implemented by secondary and/or postsecondary vocational agriculture instructors in Iowa.

The final questionnaire (see Appendix B) included 45 articulation activities that required two ratings, one for "importance" of the activity in promoting articulation, and one for "level of implementation" of the activity. In both cases a nine-point rating scale was used.

Data collection. The questionnaires were administered at the 1976 Agriculture/Agribusiness Education Conference while the conference participants were divided into 15 district meetings. Informed leaders for each group directed the instructors in completing the instrument.

Data analyses: One-way analysis of variance was used to test for differences among the ratings of three groups: (1) high school vocational agriculture instructors, (2) postsecondary area school agriculture instructors, and (3) postsecondary area school agriculture department heads. If the F ratio was significant at the .05 level, the Duncan test was used to identify where the differences among the groups existed.

One-way analysis of variance was used to test for differences in the articulation activity need indicator scores between high school and postsecondary area school agriculture instructors. (Groups 2 and 3 were combined for this analysis.) These need indicator scores were acquired by adding the importance ratings to the need for implementation scores for each item. The need for implementation scores was calculated by reversing the implementation ratings received on the level of implementation rating scale. (Example: A level of implementation rating of 1.0 would equal a need for implementation score of 9.0; 2.0 = 8.0; 3.0 = 7.0; 4.0 = 6.0; 5.0 = 5.0). It was necessary to reverse the implementation ratings so they would be additive with the importance ratings, and therefore provide a continuum of articulation need indicator scores from low to high.

The merging of the participants' perceived level of importance with their perceived level of implementation for each activity should assist greatly in identifying the articulation needs between secondary and postsecondary vocational agriculture programs. Thus, the greater the need indicator score, the greater the need for articulation.

Results

The results of the study of articulation activities are presented under the following headings: (1) Instructor position; (2) Experiences of teachers; (3) Importance and implementation ratings of articulation activities; and (4) Articulation need indicator scores.

Instructor position

The number and percentage of instructors by position who participated in the survey are presented in Table 1.

Table 1. Number and percentage of instructors by position

Group number	Group	Number	Percent
1	High school instructors	222	83.4
2	Postsecondary school instructors	35	13.2
3	Postsecondary area school department heads	9	3.4
	TOTAL	266	100.0

Of the 266 instructors of agriculture participating in the survey, 222 were high school vocational agriculture instructors and 44 were postsecondary area school instructors, nine of which were department heads.

Experiences of Teachers

The mean years of argiculture teaching and related experience by instructor groups are revealed in Table 2. Postsecondary area school department heads were in their current position for a greater mean number of years (6.00) than high school or postsecondary area school instructors. High school instructors had received more teaching experience in high school vocational agriculture programs.

Table 2. Mean years of teaching and related experience by instructor group

Variable	Group 1[a] Mean	Group 2[b] Mean	Group 3[c] Mean	Total Mean
1. Years taught in current position	5.31	4.50	6.00	5.23
2. Years teaching experience in secondary vocational agriculture	7.43	6.47	3.33	7.17
3. Years teaching experience in postsecondary schools	0.22	4.59	6.22	0.98
4. Years employment experience in farming, business, and industry related to agriculture	4.29	9.47	11.22	5.19

[a]Group 1 = High school vocational agriculture instructors.

[b]Group 2 = Postsecondary area school agriculture instructors.

[c]Group 3 = Postsecondary area school agriculture department heads.

Postsecondary area school agriculture department heads had received a mean of 11.22 years employment experience in farming, business and industry related to agriculture. Postsecondary area school instructors had received a mean of 9.47 years and high school instructors had received a mean of 4.29 years of agricultural related employment experience.

Importance and implementation ratings of articualtion activities

Table 3 presents the means, standard deviations, and F ratios for importance and implementation ratings of articulation activities for each group. The articulation activities are listed by rank order of importance in promoting articulation between high school and postsecondary area school agriculture programs. The rank order of importance was determined by the total group mean rating for each activity.

The five activities considered most important by the total group in promoting articulation are as follows:

Table 3. Means, standard deviations and F ratios for importance and implementation ratings of articulation activities

Activity		Group 1[a] Mean / S.D.	Group 2[b] Mean / S.D.	Group 3[c] Mean / S.D.	Total Mean / S.D.	F ratio
1. Revise curriculum periodically to keep current with changing technology.	(Imp.)[d]	8.23 / 0.97	8.77 / 0.50	8.67 / 0.50	8.31 / 0.93	5.79** 2>1
	(Impl.)[e]	6.28 / 2.02	7.03 / 1.82	7.33 / 1.80	6.43 / 2.00	2.90
2. Invite vo-ag instructors and counselors to visit area school programs.	(Imp.)	7.40 / 1.67	8.53 / 0.83	8.22 / 0.97	7.58 / 1.62	8.35** 2>1
	(Impl.)	5.36 / 2.53	7.03 / 1.99	7.56 / 1.42	5.69 / 2.52	9.19** 2,3>1
3. Develop an advanced curriculum that is flexible to allow for variations among students.	(Imp.)	7.58 / 1.39	7.32 / 1.65	7.33 / 2.24	7.54 / 1.45	0.57
	(Impl.)	4.55 / 1.90	5.45 / 2.25	7.00 / 3.16	4.78 / 2.08	8.37** 3>1,2;2>1
4. Utilize cooperative experience programs to expand learning experiences of student.	(Imp.)	7.40 / 1.52	8.03 / 1.45	8.00 / 0.93	7.50 / 1.51	2.99* 2>1
	(Impl.)	5.03 / 2.28	6.66 / 1.73	6.88 / 2.85	5.33 / 2.32	9.20** 2,3>1
5. Develop a communication procedure with local school counselors.	(Imp.)	7.39 / 1.62	8.24 / 0.96	7.33 / 2.18	7.49 / 1.60	4.33*
	(Impl.)	4.83 / 2.22	5.18 / 2.42	5.44 / 3.13	4.91 / 2.29	0.60
6. Become familiar with agricultural career clusters, career opportunities and employment possibilities.	(Imp.)	7.47 / 1.50	7.71 / 1.85	7.11 / 2.32	7.49 / 1.58	0.60
	(Impl.)	5.16 / 2.05	6.28 / 1.89	7.00 / 2.35	5.40 / 2.09	7.02** 2,3>1
7. Maintain professional standards by using certification requirements for high school and area school instructors.	(Imp.)	7.54 / 1.62	6.74 / 2.48	6.67 / 2.50	7.41 / 1.80	3.82*
	(Impl.)	5.67 / 2.40	6.49 / 2.72	8.11 / 2.32	5.90 / 2.50	5.37** 3>1
8. Include an agricultural career unit in the instructional program.	(Imp.)	7.35 / 1.63	7.72 / 2.05	7.11 / 2.47	7.38 / 1.72	0.77
	(Impl.)	5.64 / 2.23	6.13 / 2.53	5.75 / 3.50	5.71 / 2.32	0.59
9. Provide broad high school agriculture program to inform students of careers available.	(Imp.)	7.30 / 1.59	7.47 / 2.11	7.78 / 0.83	7.33 / 1.65	0.50
	(Impl.)	5.57 / 1.91	5.84 / 1.95	6.75 / 2.38	5.65 / 1.94	1.59
10. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs.	(Imp.)	7.18 / 1.65	8.06 / 1.23	8.00 / 1.00	7.32 / 1.61	5.41** 2>1
	(Impl.)	4.09 / 2.31	5.19 / 2.57	7.44 / 1.74	4.39 / 2.43	11.13** 3>1,2;2>1

[a]Group 1 = High school vocational agriculture instructors.

[b]Group 2 = Postsecondary area school agriculture instructors.

[c]Group 3 = Postsecondary area school agriculture department heads.

[d]Means and standard deviations for importance ratings.

[e]Means and standard deviations for level of implementation ratings.

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table 3. (continued)

Activity		Group 1 Mean / S.D.	Group 2 Mean / S.D.	Group 3 Mean / S.D.	Total Mean / S.D.	F ratio
11. Utilize area school students or graduates to inform vo-ag students of programs offered at area schools.	(Imp.)	7.11 / 1.75	8.15 / 1.13	7.11 / 1.97	7.25 / 1.72	5.53**
	(Impl.)	3.84 / 2.33	5.33 / 2.50	6.11 / 1.97	4.16 / 2.42	8.92** 2,3>1
12. Develop a program to identify prospective students with interest in agriculture.	(Imp.)	7.06 / 1.73	7.76 / 1.68	7.78 / 1.20	7.17 / 1.72	3.03*
	(Impl.)	4.49 / 2.16	5.10 / 1.99	5.67 / 2.45	4.62 / 2.16	2.17
13. Work jointly to identify businesses for potential training stations.	(Imp.)	7.11 / 1.67	7.38 / 1.99	7.25 / 1.39	7.15 / 1.70	0.40
	(Impl.)	3.39 / 2.09	3.94 / 2.22	6.25 / 2.44	3.57 / 2.18	7.54 3>1,2
14. Determine level of knowledge and skills students have when they enter the area school.	(Imp.)	7.14 / 1.64	7.27 / 1.50	6.67 / 2.24	7.14 / 1.64	0.47
	(Impl.)	4.39 / 1.92	5.13 / 1.91	4.67 / 2.74	4.51 / 1.96	1.91
15. Define and communicate the role of high school and area school programs.	(Imp.)	7.04 / 1.87	7.85 / 1.33	6.56 / 2.56	7.13 / 1.85	3.36*
	(Impl.)	3.84 / 1.84	5.22 / 2.06	4.00 / 2.29	4.05 / 1.95	7.18** 2>1
16. Exchange program and curricula information.	(Imp.)	7.04 / 1.48	7.38 / 1 21	6.33 / 2.45	7.06 / 1.50	1.88
	(Impl.)	3.77 / 1.96	3.97 / 2.06	3.33 / 2.24	3.78 / 1.98	0.38
17. Provide educational programs for students with special needs.	(Imp.)	6.93 / 1.75	7.73 / 1.28	6.78 / 2.54	7.03 / 1.74	3.14*
	(Impl.)	4.45 / 2.07	5.77 / 2.25	3.67 / 2.83	4.60 / 2.17	6.06** 2>1,3
18. Identify each student's career objectives and design student's program accordingly.	(Imp.)	6.86 / 1.84	7.50 / 1.56	7.56 / 2.35	6.97 / 1.84	2.26
	(Impl.)	4.57 / 1.89	5.84 / 1.73	5.67 / 2.92	4.80 / 1.97	6.96** 2>1
19. Work jointly in providing adult education.	(Imp.)	6.91 / 2.21	7.13 / 2.08	7.33 / 2.00	6.95 / 2.19	0.28
	(Impl.)	3.91 / 2.34	4.30 / 2.17	4.88 / 2.85	4.00 / 2.33	0.94
20. Summarize competencies needed by students to enter the job market.	(Imp.)	6.85 / 1.72	7.00 / 1.37	7.22 / 1.86	6.88 / 1.68	0.32
	(Impl.)	3.93 / 1.94	4.00 / 2.33	5.00 / 2.18	3.99 / 2.01	1.21
21. Communicate to all instructors any changes in procedures for teacher certification.	(Imp.)	6.84 / 2.13	7.09 / 2.37	5.89 / 2.26	6.84 / 2.17	1.09
	(Impl.)	4.39 / 2.25	4.69 / 2.49	6.57 / 3.21	4.51 / 2.34	3.07* 3>1
22. Inform high school instructors about placement and employment of former vo-ag students.	(Imp.)	6.83 / 1.85	7.12 / 2.10	5.67 / 2.24	6.83 / 1.90	2.09
	(Impl.)	3.44 / 1.97	4.41 / 2.28	4.11 / 2.47	3.61 / 2.06	3.34* 2>1
23. Determine educational needs through community survey and other available information.	(Imp.)	6.79 / 1.81	7.12 / 1.79	6.78 / 2.49	6.83 / 1.83	0.47
	(Impl.)	4.49 / 2.06	5.19 / 1.80	5.56 / 2.79	4.63 / 2.07	2.49
24. Provide for individual and group guidance that includes students, parents, and guidance personnel.	(Imp.)	6.52 / 1.69	7.59 / 1.02	7.11 / 1.83	6.67 / 1.66	6.72** 2>1
	(Impl.)	4.09 / 2.03	4.46 / 2.10	5.44 / 2.74	4.20 / 2.08	2.10

Table 3. (continued)

Activity		Group 1 Mean S.D.	Group 2 Mean S.D.	Group 3 Mean S.D.	Total Mean S.D.	F ratio
25. Conduct area meetings for administrators, counselors, board members and agriculture instructors concerning high school and area school programs.	(Imp.)	6.56 1.89	7.03 1.70	5.78 2.33	6.60 1.89	1.78
	(Impl.)	2.96 1.92	3.38 2.04	4.38 2.92	3.07 2.00	2.38
26. Build student's postsecondary production agriculture occupational experience upon high school occupational experiences.	(Imp.)	6.42 1.90	7.09 1.87	6.89 2.09	6.52 1.91	2.00
	(Impl.)	4.25 2.02	4.94 1.78	5.88 2.23	4.41 2.02	3.86* 3>1
27. Conduct articulation meetings on area school district basis.	(Imp.)	6.24 1.86	7.52 1.79	7.22 1.92	6.43 1.90	7.68** 2>1
	(Impl.)	3.22 2.02	3.57 3.05	3.33 2.18	3.27 2.18	0.33
28. Utilize area school specialists in secondary agriculture programs.	(Imp.)	6.40 2.02	6.62 1.65	6.38 2.00	6.43 1.97	0.18
	(Impl.)	3.34 1.81	3.64 2.15	3.00 2.20	3.37 1.87	0.52
29. Utilize planned procedures to idenitfy prospective students.	(Imp.)	6.09 1.77	8.00 0.97	7.44 2.07	6.37 1.82	20.00** 2>1;3>1
	(Impl.)	3.97 2.01	4.73 2.66	4.33 3.04	4.09 2.16	1.70
30. Send pertinent information to students' former vo-ag instructor.	(Imp.)	6.27 2.05	6.97 1.78	6.00 1.73	6.35 2.02	1.95
	(Impl.)	2.42 1.69	3.16 2.07	3.50 1.93	2.57 1.78	3.50*
31. Provide inservice education for high school teachers by area school instructors.	(Imp.)	6.36 2.14	6.12 2.42	6.00 2.78	6.32 2.19	0.26
	(Impl.)	3.35 2.03	3.58 2.02	4.00 3.20	3.41 2.10	0.54
32. Inform other instructor(s) in the community where students are placed for employment experience.	(Imp.)	6.31 1.92	6.47 2.38	5.67 2.06	6.31 1.98	0.58
	(Impl.)	3.37 1.88	3.69 2.15	4.25 2.49	3.45 1.95	1.08
33. Build student's postsecondary employment experiences upon high school employment experiences.	(Imp.)	6.27 1.87	6.74 2.30	5.14 2.67	6.30 1.96	2.12
	(Impl.)	3.99 1.92	4.49 1.82	5.83 2.86	4.12 1.95	3.36* 3>1
34. Grant area school entry credit for knowledge and skills assessed.	(Imp.)	6.23 1.96	6.56 2.09	6.67 2.50	6.29 2.00	0.56
	(Impl.)	3.36 1.94	3.97 2.01	4.33 3.39	3.48 2.03	1.96
35. Prepare comprehensive display of area school programs.	(Imp.)	6.05 1.84	7.29 1.53	6.22 2.49	6.22 1.86	6.81** 2>1
	(Impl.)	4.52 2.14	5.46 1.91	4.44 2.24	4.65 2.13	2.80
36. Provide basic and specialized instruction so student may exit at any point in a program.	(Imp.)	6.04 2.07	6.44 2.12	7.33 1.22	6.14 2.07	2.13
	(Impl.)	4.38 2.10	4.61 1.96	6.89 1.45	4.51 2.11	6.41** 3>1,2
37. Build area school leadership activities upon FFA experiences of students.	(Imp.)	6.11 2.08	5.97 2.34	5.44 1.67	6.07 2.10	0.47
	(Impl.)	3.87 2.02	4.07 2.14	3.22 2.22	3.87 2.04	0.59
38. Use newsletters to keep informed of high school and area school activities.	(Imp.)	5.89 1.89	6.85 1.60	6.33 2.29	6.03 1.89	4.03* 2>1
	(Impl.)	3.56 2.12	4.03 2.74	4.13 2.70	3.84 2.23	0.77

Table 3. (continued)

Activity		Group 1 Mean S.D.	Group 2 Mean S.D.	Group 3 Mean S.D.	Total Mean S.D.	F ratio
39. Use Iowa curriculum guides to identify content to be taught in secondary and area school programs.	(Imp.)	6.00 1.98	5.09 2.49	4.67 2.24	5.83 2.08	4.36*
	(Impl.)	4.27 2.03	4.06 2.40	5.33 2.40	4.28 2.10	1.31
40. Conduct social event for secondary and post-secondary agriculture instructors.	(Imp.)	5.06 2.50	7.15 2.16	6.78 2.11	5.39 2.55	12.30** 2,3>1
	(Impl.)	3.07 2.20	3.94 2.46	3.78 2.68	3.22 2.27	2.23
41. Conduct high school exploratory programs by area schools.	(Imp.)	4.60 2.40	6.56 2.36	4.67 2.60	4.85 2.48	9.26** 2>1;2>3
	(Impl.)	3.12 2.13	5.07 2.56	3.22 2.68	3.39 2.31	9.95** 2>1,3
42. Communicate major club activities of area schools to high school instructors.	(Imp.)	4.74 1.94	5.35 2.46	4.11 2.26	4.80 2.03	1.89
	(Impl.)	3.01 1.83	3.31 2.15	2.14 1.46	3.02 1.88	1.16
43. Use basic core curriculum for all high school agriculture programs.	(Imp.)	4.87 2.43	3.56 2.40	4.13 1.13	4.68 2.43	4.[illegible]4** 1>2
	(Impl.)	3.77 2.18	2.83 1.88	2.86 1.35	3.61 2.15	2.97* 1>2
44. Request DPI to provide major role in promoting articulation.	(Imp.)	4.10 2.05	4.77 2.59	4.67 2.40	4.21 2.14	1.65
	(Impl.)	2.86 1.74	3.44 2.53	3.11 2.71	2.96 1.92	1.24
45. Teach general exploratory agriculture at high school level and preparatory agriculture at the area school.	(Imp.)	3.89 2.37	4.46 2.67	5.22 2.86	4.01 2.44	1.94
	(Impl.)	3.49 2.32	3.68 2.29	5.25 2.49	3.58 2.34	2.22

1. Revise curriculum periodically to keep current with changing technology.
2. Invite vocational agriculture instructors and counselors to visit area school programs.
3. Develop an advanced curriculum that is flexible to allow for variations among students.
4. Utilize cooperative experience programs to expand learning experiences of student.
5. Develop a communication procedure with local school counselors.

The five activities considered least important by the total group in promoting articulation are as follows:

1. Teach general exploratory agriculture at high school level and preparatory agriculture at the area school.
2. Request DPI (State Department of Public Instruction) to provide major role in promoting articulation.
3. Use basic core curriculum for all high school agriculture programs.
4. Communicate major club activities of area schools to high school instructors.
5. Conduct high school exploratory programs by area schools.

There were significant differences among the three groups for 19 of the 45 articulation activities on the importance rating scale. The mean importance ratings were significantly higher for area school instructors than for high school instructors for the following activities.

1. Revise curriculum periodically to keep current with changing technology.
2. Invite vo-ag instructors and counselors to visit area school programs.

3. Utilize cooperative experience programs to expand learning experiences of student.
4. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs.
5. Provide for individual and group guidance that includes students, parents, and guidance personnel.
6. Conduct articulation meetings on area school district basis.
7. Utilize planned procedures to identify prospective students.
8. Prepare comprehensive display of area school programs.
9. Use newsletters to keep informed of high school and area school activities.
10. Conduct social event for secondary and postsecondary agriculture instructors.
11. Conduct high school exploratory programs by area schools.

The mean importance ratings were significantly higher for area school instructors when compared to area school department heads for only one activity: conduct high school exploratory programs by area schools.

A significantly higher mean importance rating was observed for high school instructors than for area school instructors for only the following activity: use basic core curriculum for all high school agriculture programs.

Two activities received a significantly higher importance rating from area school department heads than from high school vocational agriculture instructors. These were as follows:

1. Invite vo-ag instructors and counselors to visit area school programs.
2. Develop an advanced curriculum that is felxible to allow for variations among students.

3. Utilize cooperative experience programs to expand learning experiences of student.
4. Become familiar with agricultural career clusters, career opportunities and employment possibilities.
5. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs.
6. Utilize area school students or graduates to inform vo-ag students of programs offered at area schools.
7. Define and communicate the role of high school and area school programs.
8. Provide educational programs for students with special needs.
9. Identify each student's career objectives and design student's program accordingly.
10. Inform high school instructors about placement and employment of former vo-ag students.
11. Conduct high school exploratory programs by area schools.

The mean level of implementation ratings were significantly higher for area school instructors than for area school department heads for the following two activities:

1. Provide educational programs for students with special needs.
2. Conduct high school exploratory programs by area schools.

Area school department heads rated 12 activities significantly higher than high school instructors for the level of implementation. These activities are as follows:

1. Invite vo-ag instructors and counselors to visit area school programs.
2. Develop an advanced curriculum that is flexible to allow for variations among students.

3. Utilize cooperative experience programs to expand learning experiences of students.
4. Become familiar with agricultural career clusters, career opportunities and employment possibilities.
5. Maintain professional standards by using certification requirements for high school and area school instructors.
6. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs.
7. Utilize area school students or graduates to informat vo-ag students of programs offered at area schools.
8. Work jointly to identify businesses for potential training stations.
9. Communicate to all instructors any changes in procedures for teacher certification.
10. Build student's postsecondary production agriculture occupational experience upon high school occupational experiences.
11. Build student's postsecondary employment experiences upon high school employment experiences.
12. Provide basic specialized instruction so student may exit at any point in a program.

The mean level of implementation ratings by area school department heads were significantly greater than the ratings received from area school instructors for the following four activities:

1. Develop an advanced curriculum that is flexible to allow for variations among students.
2. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs.
3. Work jointly to identify businesses for potential training stations.
4. Provide basic and specialized instruction so student may exit at any point in a program.

High school instructors rated one activity significantly higher than area school instructors for the level of implementations of the activity: use basic core curriculum for high school agriculture programs.

Articulation need indicator scores

The means, standard deviations and F ratios for the articulation activity need indicator scores of high school vocational agriculture instructors and postsecondary area school instructors and department heads are revealed in Table 4. The activities are listed by rank according to the total group mean need indicator score.

The range of total group mean need indicator scores was from a low of 10.54 to a high of 13.87, with a score of 18.0 as the highest possible score.

The five activities receiving the greatest total group mean need indicator scores are as follows:

1. Send pertinent information to student's former vo-ag instructor.
2. Work jointly to identify businesses for potential training stations.
3. Conduct area meetings for administrators, counselors, board members and agriculture instructors concerning high school and area school programs.
4. Exchange program and curricula information.
5. Inform high school instructors about placement and employment of former vo-ag students.

The five activities receiving the lowest articulation need indicator scores are as follows:

1. Teach general exploratory agriculture at high school level and preparatory agriculture at the area school.
2. Use basic core curriculum for all high school agriculture programs.
3. Request DPI (Iowa Department of Public Instruction) to provide major role in promoting articulation.

Table 4 Means, standard diviations and F ratios for comparison of articulation activity need indicator scores between high school and postsecondary vocational agriculture instructors

Activity	Group 1[a] Mean / S.D.	Group 2[b] Mean / S.D.	Total Mean / S.D.	F ratio
1. Send pertinent information to student's former vo-ag instructor	13.94 / 2.34	13.54 / 2.62	13.87 / 2.40	0.90
2. Work jointly to identify businesses for potential training stations	13.82 / 2.35	12.92 / 2.51	13.66 / 2.40	4.60
3. Conduct area meetings for administrators, counselors, board members and agriculture instructors concerning high school and area school programs	13.71 / 2.56	13.23 / 3.10	13.62 / 2.67	1.07
4. Exchange program and curricula information	13.22 / 2.28	13.32 / 2.48	13.24 / 2.31	0.06
5. Inform high school instructors about placement and employment of former vo-ag students	13.36 / 2.27	12.54 / 2.61	13.21 / 2.35	4.17*
6. Conduct articulation meetings on area school district basis	13.00 / 2.53	14.00 / 3.03	13.17 / 2.64	4.69*
7. Utilize area school specialists in secondary agriculture programs	13.14 / 2.26	13.02 / 2.50	13.12 / 2.30	0.08
8. Utilize area school students or graduates to inform vo-ag students of programs offered at area schools	13.26 / 2.57	12.43 / 2.47	13.10 / 2.56	3.59
9. Define and communicate the role of high school and area school programs	13.19 / 2.38	12.61 / 2.31	13.08 / 2.37	2.01
10. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs	13.18 / 2.53	12.32 / 2.72	13.02 / 2.58	3.75*
11. Summarize competencies needed by students to enter the job market	13.06 / 2.46	12.78 / 2.60	13.00 / 2.48	0.41
12. Work jointly in providing adult education	13.00 / 2.72	12.74 / 2.74	12.95 / 2.72	0.29
13. Inform other instructor(s) in the community where students are placed for employment experience	13.04 / 2.17	12.45 / 2.37	12.93 / 2.21	2.33
14. Provide inservice education for high school teachers by area school instructors	13.07 / 2.44	12.30 / 2.28	12.93 / 2.43	3.35
15. Develop an advanced curriculum that is flexible to allow for variations among students	13.10 / 2.17	11.68 / 2.40	12.84 / 2.27	13.60**
16. Determine level of knowledge and skills students have when they enter the area school	12.90 / 2.15	12.08 / 2.26	12.75 / 2.19	4.71*
17. Grant area school entry credit for knowledge and skills assessed	12.79 / 2.30	12.58 / 2.06	12.75 / 2.25	0.28
18. Develop a communication procedure with local school counselors	12.71 / 2.55	12.81 / 2.69	12.73 / 2.57	0.05
19. Develop a program to identify prospective students with interest in agriculture	12.68 / 2.20	12.53 / 2.12	12.65 / 2.18	0.16
20. Provide for individual and group guidance that includes students, parents, and guidance personnel	12.55 / 2.09	12.85 / 2.38	12.60 / 2.15	0.64
21. Provide educational programs for students with special needs	12.53 / 2.34	12.20 / 2.41	12.47 / 2.35	0.65

[a]Group 1 = High school vocational agriculture instructors

[b]Group 2 = Postsecondary area school agriculture instructors and department heads

*Significant at the .05 level of probability

**Significant at the .01 level of probability

Table 4 (continued).

Activity	Group 1[a] Mean / S.D.	Group 2[b] Mean / S.D.	Total Mean / S.D.	F ratio
22. Utilize planned procedures to identify prospective students	12.25 / 2.38	13.28 / 2.68	12.43 / 2.46	5.83*
23. Use newsletters to keep informed of high school and area school activities	12.29 / 2.62	12.76 / 2.76	12.37 / 2.65	1.01
24. Communicate to all instructors any changes in procedures for teacher certification	12.40 / 2.33	12.14 / 2.76	12.35 / 2.41	0.34
25. Build students' postsecondary employment experiences upon high school employment experiences	12.43 / 2.23	11.79 / 2.75	12.32 / 2.34	2.39
26. Build area school leadership activities upon FFA experiences of students	12.36 / 2.28	11.89 / 2.23	12.27 / 2.27	1.29
27. Identify each student's career objectives and design student's program accordingly	12.41 / 0.61	11.68 / 1.65	12.27 / 2.04	4.24*
28. Build student's postsecondary production agriculture occupational experience upon high school occupational experiences	12.35 / 2.28	11.85 / 2.39	12.26 / 2.30	1.53
29. Determine educational needs through community survey and other available information	12.33 / 2.57	11.83 / 2.02	12.24 / 2.48	1.34
30. Conduct social event for secondary and postsecondary agriculture instructors	12.02 / 2.47	13.13 / 2.77	12.23 / 2.55	6.21**
31. Utilize cooperative experience programs to expand learning experiences of student	12.42 / 1.94	11.33 / 1.44	12.22 / 1.91	11.35**
32. Become familiar with agricultural career clusters, career opportunities and employment possibilities	12.40 / 2.15	11.10 / 2.17	12.16 / 2.20	12.23**
33. Invite vo-ag instructors and counselors to visit area school programs	12.08 / 2.54	11.32 / 1.86	11.94 / 2.44	3.32
34. Revise curriculum periodically to keep current with changing technology	11.97 / 1.92	11.63 / 1.71	11.91 / 1.88	1.05
35. Provide broad high school agriculture program to inform students of careers available	11.80 / 1.86	11.46 / 1.93	11.74 / 1.87	1.07
36. Include an agricultural career unit in the instructional program	11.82 / 2.09	11.35 / 2.91	11.74 / 2.25	1.33
37. Communicate major club activities of area schools to high school instructors	11.67 / 2.09	11.95 / 2.50	11.72 / 2.17	0.53
38. Provide basic and specialized instruction so student may exit at any point in a program	11.71 / 2.12	11.53 / 1.59	11.68 / 2.03	0.28
39. Prepare comprehensive display of area school programs	11.61 / 2.33	11.79 / 1.79	11.64 / 2.24	0.20
40. Use Iowa Curriculum guides to identify content to be taught in secondary and area school programs	11.72 / 2.26	10.66 / 2.20	11.53 / 2.28	7.50**
41. Maintain professional standards by using certification requirements for high school and area school instructors	11.85 / 2.39	9.86 / 2.14	11.47 / 2.47	24.55**
42. Conduct high school exploratory programs by area schools	11.46 / 2.62	11.38 / 1.94	11.45 / 2.50	0.03
43. Request DPI to provide major role in promoting articulation	11.21 / 2.07	11.44 / 2.06	11.25 / 2.07	0.41
44. Use basic core corriculum for all high school agriculture programs	11.17 / 2.13	10.62 / 1.82	11.07 / 2.09	2.12
45. Teach general exploratory agriculture at high school level and preparatory agriculture at the area school	10.48 / 2.33	10.82 / 1.51	10.54 / 2.21	0.66

4. Conduct high school exploratory programs by area schools.

5. Maintain professional standards by using certification requirements for high school and area school instructors.

There were significant differences in mean articulation need indicator scores between the two groups for 12 of the 45 articulation activities.

The mean need indicator scores were significantly higher for area school instructors than for high school instructors for the following activities:

1. Conduct articulation meetings on area school district basis ($p.<.05$).

2. Utilize planned procedures to identify prospective students ($p.<.05$).

3. Conduct social event for secondary and postsecondary agriculture instructors ($p.<.01$).

A significantly higher mean need indicator score was observed for high school instructors than for area school instructors for the following activities:

1. Inform high school instructors about placement and employment of former vo-ag students ($p.<.05$).

2. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs ($p.<.05$).

3. Develop an advanced curriculum that is flexible to allow for variations among students ($p.<.01$).

4. Determine level of knowledge and skills students have when they enter the area school ($p.<.05$).

5. Identify each student's career objectives and design student's program accordingly ($p.<.05$).

6. Utilize cooperative experience programs to expand learning experiences of student ($p.<.01$).

7. Become familiar with agricultural career clusters, career opportunities and employment possibilities ($p.<.01$).

8. Use Iowa Curriculum Guides to identify content to be taught in secondary and area school programs ($p.<.01$).

9. Maintain professional standards by using certification requirements for high school and area school instructors ($p.<.01$).

Summary and Conclusions

This study identified activities which may enhance articulation between high school and area school agriculture programs. The study investigated the importance of each activity in promoting articulation and the extent to which each activity had been implemented within area school district boundaries. Articulation need indicator scores were calculated and analyzed for each activity. The study further sought to identify differences between high school and area school vocational agriculture instructors as to the perceived need for articulation of the activities identified.

High school instructors and area school personnel participating in this study believed that revising the agriculture curriculum periodically to keep current with changing technology should be a priority activity in promoting articulation between high school and area school agriculture programs.

Perhaps one of the most important findings of this study was that the total group mean importance rating was 5.0 or above for 40 of the 45 articulation activities identified. The relative high ratings suggest that the respondents think the 40 activities would enhance articulation between high school and area school agriculture programs. It may be concluded that secondary and postsecondary agriculture educators recognize articulation as an issue which vitally affects agricultural students and programs at the secondary and postsecondary levels.

Many of the articulation activities which ranked among the top 15 for importance ratings relate to communication between high school and area school agriculture personnel. Therefore, communication of various aspects of the instructional program may be considered an important segment of the articulation process.

The mean importance ratings were significantly higher for area school instructors than for high school instructors for 11 of the 45 articulation activities on the importance rating scale. Whereas, only one activity received a significantly higher mean importance rating from high school instructors than from area school instructors. These findings indicate that area school instructors are more concerned than high school instructors relative to conducting activities which would promote articulation. However, it should be noted that many of these 11 activities for which differences were observed relate more directly to area school programs than to high school programs and that area school programs would probably receive more direct program benefits from these activities.

Significant differences among the three groups were observed for 18 of the 45 articulation activities regarding the level at which these activities have been implemented within area school districts. A close observation of these differences suggest that area school instructors and agriculture department heads perceived that articulation activities are being conducted to a greater extent than the level of activity perceived by high school instructors.

In recent years there has been a rapid expansion of postsecondary school vocational programs. Secondary school programs have also expanded rather rapidly. An increasing number of young people are seeking vocational training in postsecondary schools. Articulation is needed to maximize the career preparation of persons following this educational avenue.

High school instructors and area school personnel participating in this study believed that sending pertinent information to the student's former o-ag instructor was the activity with the greatest need for articulation between secondary and postsecondary programs of agriculture. The participants also believed that working jointly to identify businesses for potential training stations for the occupational experience programs of students would enhance articulation. This finding would perhaps suggest that there are situations where the area schools and high schools are utilizing the same agribusiness firms for training stations, thus providing similar experiences through both programs.

The participants of this study also expressed a need for conducting articulation meetings by area school district boundaries, and that area meetings were needed for administrators, counselors, board members and agriculture instructors concerning high school and area school programs.

Another important finding of this study was that the total group mean need indicator score was above 9.0 for all of the 45 articulation activities identified. A mean rating of 9.0 would be the midpoint of the possible range of scores when the scores from the importance scale and the implementation scale are merged to obtain the articulation need indicator score. Consequently, this would suggest that the respondents believed all 45 activities were important for enhancing articulation between high school and area school agriculture programs. It may be concluded that secondary and postsecondary agriculture educators recognize articulation as an issue which vitally affects agriculture students and programs at the secondary and postsecondary levels.

Many of the articulation activities which ranked among the top 20 for articulation need indicator scores relate to communication between high

school and area school agriculture personnel. Therefore, communication of various aspects of the instructional program may be considered an important segment of the articulation process.

Several of the activities receiving high articulation need indicator scores relate to program entrance and exit. The data suggest that area school programs should be organized and implemented in such a manner that educational experiences provided by area schools should build on the educational experiences students received from high school agriculture programs.

There were also several activities receiving high scores which relate to career guidance and counseling. Therefore, counselors, parents, students and instructors should be fully aware of the educational alternatives provided by secondary schools and area vocational schools. Greater assistance should be provided students in identifying their career objective and assisting students in designing their program of course work and related experiences which will enable each student to reach his/her career objective.

The mean articulation need indicator scores were significantly higher for high school instructors than for area school instructors for nine of the 45 articulation activities. Whereas, only three activities received a significantly higher mean need indicator score from area school instructors than from high school instructors. These findings indicate that there were some differences in the perceived need for articulation between secondary and postsecondary vocational agriculture programs.

References

An Approach to the Articulation and Coordination of Occupational Preparatory Curriculums from the High School Through the Community College: Paper and Reports of Task Forces 1 and 11. Salem, Oregon: State Board of Education, December, 1968. (ERIC Document Reproduction Service No. ED 031 570).

Articulation: A Study by the National Advisory Council on Vocational Education, Washington, D. C., The National Advisory Council on Vocational Education, May 1976.

Bender, L. W. Articulation of Secondary and Postsecondary Occupational Education Programs, Columbus, Ohio: The Center for Vocational and Technical Education, 1973.

Borg, W. R. and M. D. Gall. Educational Research: An Introduction. New York: David McKay Company, Inc., 1971.

Evans, R. N. Foundations of Vocational Education. Columbus, Ohio: Charles E. Merrill Publishing Company, 1971.

Byler, B. L. Analysis of Factors Related to the Educational Plans of Iowa Vocational Agriculture Students. Ames: Iowa State University, Department of Agricultural Education, 1975.

Herr, E. L. Unifying an Entire System of Education Around a Career Development Theme. In K. Goldhammer & R. E. Taylor (Eds.), Career Education: Perspective and Promise. Columbus, Ohio: Charles E. Merrill Publishing Company, 1972.

Kintzer, F. C. From High School to Community College -- A vital Link in the Articulation Process. Junior College Research Review, June, 1972, 6, 1-4. (ERIC Document Reproduction Service No. EJ061 935).

Malsbary, D. R. and S. F. Holmes. A Study of Education for the Distributive Occupations with Implications for Better Articulation of High School and Community College Programs in Connecticut. Hartford, Connecticut: Connecticut State Department of Education, 1969. (ERIC Document Reproduction Service No. ED 013 371).

Manley, F. W. Articulation Between North Carolina's Public System of Elementary and Secondary Schools and Public System of Technical Institutes and Community Colleges. Raleigh, North Carolina: North Carolina Research Coordinating Unit in Occupational Education, December 1970. (ERIC Document Reproduction Service No. ED 051 375).

Svob, M. J. A Pilot Project for High School/Community College Articulation. North Central Association Quarterly, Winter 1973, 47, 281-285. (ERIC Document Reproduction Service No. EJ 072 691).

The Articulation of Secondary and Postsecondary Education, Albany, New York: The State Education Department, 1974.

Weinheimer, S. R. Articulation a Compelling Lifeline for the Future of Vocational Education. New Perspectives in Vocational Education, UCLA/EPDA Fellowship Program, UCLA, 1976-77, 1, 63-68.

Williams, D. L. and W. Rawls. Supervised Occupational Experience. Agricultural Education Magazine, January, 1977, 49, 152-153.

APPENDIX A

Guidelines for Articulation Between Secondary and Postsecondary Programs in Agriculture

GUIDELINES FOR ARTICULATION BETWEEN SECONDARY AND POSTSECONDARY PROGRAMS IN AGRICULTURE

July 1, 1976

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INTRODUCTION

Vocational and technical education programs in agriculture are a significant part of the curriculum of many high schools and area vocational schools in Iowa. Educators in high schools and area vocational schools need guidelines that suggest articulation procedures between the secondary and postsecondary programs. Harold Crawford suggested that, "articulation is an act of uniting high schools and area vocational schools to provide educational growth for students which is continuous and clearly defined"[1]

During the spring of 1975, the Agricultural Education Department at Iowa State University and the Iowa Department of Public Instruction provided leadership to begin the development of guidelines for articulation between secondary and postsecondary vocational and technical agriculture programs. A one-week workshop was planned to focus on the development of such guidelines. Six instructors of secondary vocational agriculture and six persons representing vocational and technical agriculture programs in area vocational schools were invited to participate in the workshop. A list of the workshop participants is presented in Appendix A. The workshop was conducted at Iowa State University, July 21-25, 1975.

The results of the workshop were a list of challenges and situations identified as being related to articulation between secondary school and area vocational school agriculture programs and possible action steps for solving the problems. The challenges identified and the possible action steps were grouped into the following categories:

1. Communication and Articulation Arrangements
2. Curriculum Development
3. Career Guidance and Counseling
4. Coordination of Leadership Activities, Employment Experiences, and Employment Placement
5. Program Entrance and Exit

The outcomes of the 1975 summer workshop were presented by workshop participants to selected representatives from the Department of Public Instruction and the Department of Agricultural Education, Iowa State University on September 5 and 6, 1975.

On November 19, 1975, three regional meetings were conducted to refine and further develop the guidelines that emerged from the summer workshop. These meetings were attended by the original workshop participants residing in each region. In addition, a representative from the Iowa Department of Public Instruction, a representative from the Department of Agricultural Education, Iowa State University, and a member of the 1976 Iowa Agricultural/Agribusiness Education Conference Planning Committee also attended each regional meeting.

A list of general guidelines that could improve articulation between secondary and postsecondary agriculture programs were also developed. One of these recommendations was that "Articulation in Agricultural Education" be the theme of the 1976 Iowa Agriculture Education Conference. This

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[1]This definition was presented by Dr. Harold Crawford at the opening session of the Articulation Workshop at Iowa State University on July 21, 1975.

recommendation was accepted by various groups and committees. The original workshop participants were involved in helping plan the sessions of the conference devoted to articulation.

This report should be recognized as an initial effort to develop guidelines for improving articulation between Iowa high school and post-secondary area vocational school agriculture programs. This report was printed to facilitate further development of articulation guidelines.

I. COMMUNICATION AND ARTICULATION ARRANGEMENT

A. Challenges and Situtaions Identified

1. There is a lack of continuous communication between high school and area vocational school agriculture programs, with student-centered emphasis.
2. The missions of the area vocational school and the high school in providing vocational and technical education in agriculture are not fully understood by those concerned with these programs.
3. There is a lack of trust and understanding between instructors of high school and area vocational school programs of agriculture.
4. There is a need to improve communications about agriculture programs through counselors and other school personnel.
5. Communications about Veterans Farm Cooperative and other adult programs should be improved.
6. The increased work-load of vocational agriculture instructors makes it difficult for them to find time for articulation activities.
7. Methods and procedures used in certifying agriculture instructors to teach are not fully understood.

B. Possible Action Steps

1. Consider articulations and communications as a critical need. (High Priority)
2. Exchange of program (curriculum) information between high school and area vocational school agriculture departments when the student enrolls in the area vocational school. (Area vocational schools prepare and send student's information form to high school teacher).
3. Area vocational schools send current program and curriculum materials to high school agriculture teachers and counselors.
4. Area vocational schools prepare a comprehensive display of programs for the Agricultural Education Conference, the FFA Conference, and the State Fair.
5. Annual presentation at Agricultural Education Conference by selected area vocational school personnel concerning new programs and directions in area vocational school agriculture departments.
6. Greater participation and exchange of problems and information at sub-district and at county agriculture task force meetings.
7. Area vocational school agriculture departments send pertinent and positive student information to local agriculture teacher for his information and possible local publication regarding placement, leadership, reference to high school agriculture experience, etc. (Must have student's permission).
8. Subdistrict meetings between local school administrators, counselors, board members, agriculture teachers and area vocational school agriculture personnel concerning local and area vocational school agriculture programs.
9. Invite agriculture instructors and counselors to visit area vocational school programs and facilities and offer a question-answer session.

10. Utilize area school specialists in secondary agriculture programs (day class, adult farmer classes, young farmer classes).
11. Utilize area vocational school students or graduates to inform secondary agriculture students of programs and activities offered.
12. Utilize secondary agriculture instructors to help evaluate and recommend directions in area vocational school programs and activities.
13. Conduct at least one social event per year between secondary and post secondary agriculture instructors within each area vocational school district.
14. Treat scheduling and use of secondary and postsecondary classroom, laboratory and other facilities with all due respect.
15. Communication should be increased by use of newsletters containing information about open houses, farm demonstrations and results, FFA activites, livestock, meats, and soils contents, Agriculture Career events, etc.
16. Provide future secondary and post secondary instructors prepared at Iowa State University with the following material:
    a. The purpose of the area school which states the ten areas of educational services listed in Senate file 550;61, General Assembly, 1965.
    b. The Guidelines for Program Emphasis for Agricultural Education prepared by the Agricultural Task Force State Coordinating Committee, (June 1, 1970).
    c. A brochure containing the title and purpose of all the agriculture/agribusiness programs offered in the state.
    d. Information on program (student) activities, job opportunities, and placement of graduates.
    e. Information about Department of Public Instruction.
17. Secondary instructors increase communications with local school counselors by a continuous flow of information and by involving them in the various vocational agriculture and FFA activites conducted.
18. Professional standards should be maintained at the secondary and postsecondary level by requiring that instructors be certified for the teaching positions.
19. Provide communication to all instructors as to any changes in methods of certification of instructors.
20. Conduct an articulation workshop on an area vocational school basis for secondary and postsecondary agriculture instructors.
21. Vocational agriculture newsletter, agriculture instructor directory, and other appropriate communication from Department of Public Instruction be sent to area vocational school agriculture personnel.
22. Vocational agriculture instructors should be sent area vocational school instructor and veterans farm cooperative instructor directories.

II. CURRICULUM DEVELOPMENT

A. Challenges and Situations Identified

1. There is an excess of duplication between secondary and postsecondary agriculture programs.

2. The responsibilities of providing education for adults and for high school students are not clearly defined.
3. The variation among curriculum, instructors, and students makes it difficult to articulate programs of agriculture.
4. Programs of agriculture are not keeping up to date with changing technology.

B. Possible Actions Steps

1. Preparatory programs should be taught at both levels to meet the needs of students who exit at various points in their formal education.
2. Suggest basic core curriculum for all high school programs in the state.
   a. Vocational agriculture I and II should consist primarily of a basic core of competencies to be taught.
   b. Competencies taught over and above the basic core should reflect the needs of the community and student needs and interests.
   c. Competencies to be taught within the suggested core should be determined by the Iowa Curriculum Guide Committees.
3. Course descriptions should be provided by the secondary and post secondary programs and be available for exchange.
   a. All high school agriculture programs in an area school district provide copy of course outlines to area school in exchange for course outlines from area school.
   b. Area schools should coordinate annual meetings with secondary personnel to exchange course outlines.
4. The educational needs of the people and the needs of the communities should be determined by community survey and other information available.
   a. Department and/or curriculum advisory committee should assist in determining the needs of the community.
   b. This advisory committee may assist with community survey.
   c. Feedback from graduates should also be utilized.
5. Determine who can best meet the needs of the people to be served with the resources available, and then develop a cooperative program between secondary and postsecondary schools.
6. Set up a cooperative evaluation procedure to determine whether or not the needs have been fulfilled.
7. Periodic curriculum revisions should be made to keep current with changing technology.
8. Summarize needs and competencies (specific and general) needed by students to enter the job market.
9. Provide basic and specialized instruction so that the student may exit at any point during the high school or area school program.
10. Utilize cooperative experience program to expand the learning experiences of the student. Postsecondary employment experiences should build upon the high school employment experinece of students.
11. Provide broad high school agriculture program so that students are aware of careers and occupations available and have basic knowledge needed in a preparatory program.

12. Advisory committees should represent a broad spectrum of the industries served by the program or curriculum.
13. Core curriculum should be flexible to allow for variation of individual students.
14. The revised State Curriculum Guide for Agriculture/Agribusiness should suggest what should be taught at the postsecondary area vocational school level.
    a. Competencies within each curriculum area should be determined by a Curriculum Guide Committee established for this purpose.
    b. Competencies should specify levels of proficiency.
15. State curriculum guides should be provided for both secondary and postsecondary agriculture personnel.

III. CAREER GUIDANCE AND COUNSELING

A. Challenges and Situations Identified

1. Counselors, parents, students, and teachers are not fully aware of the educational alternatives provided by secondary schools and area vocational schools.
2. Students need to develop occupational objectives as a basis for planning their education.
3. Students need to develop educational plans to reach their career objective.
4. Students with interests in agriculture need to be identified and given help in the development of their educational plans.
5. Student advisement is limited because of inadequate background information about the student.

B. Possible Action Steps

1. Agriculture instructors should become familiar with agricultural career clusters, career opportunities, and employment possibilities through the use of advisory counselors, resource persons, and state and national needs assessment documents.
2. Agriculture instructors should include in their instruction a unit on careers in agriculture. (Career orientation and exploration should be incorporated into all instructional activities.)
3. Agriculture instructors should conduct a program of individual and group guidance that includes students, parents, and guidance personnel.
    a. Conduct a career night at which career clusters and specific career opportunities are explained to student and parents.
    b. Area vocational school personnel present a program at local career night or during a vo-ag class concerning careers and job opportunities.
    c. Agriculture instructors should utilize past graduates for testimonials related to the accomplishment of their career objectives.
4. A student's career objective should be identified, and the agriculture instructors should help design the student's program of course work and related experiences which will enable the student

to reach his/her career objective.

a. Instructors should assume that students obtain and take appropriate interest inventories early in their agricultural education program.
b. Instructors should set aside time for students to counsel with instructors, advisor or counselor concerning their career objectives and educational plans.
c. Instructors should develop a list of resource people available for students to consult with concerning their tentative occupational choices.
d. High school and area school instructors utilize supervisory visits to counsel and advise parents and students about career selection.

5. Area vocational schools should conduct invitational programs to involve secondary school students and personnel.
   a. Area schools make available brochures that are brief, attractive, and informative of all educational alternatives.
   b. Postsecondary agricultural school personnel send out periodic newsletters to area instructors.
   c. Secondary and postsecondary instructors inform the public of their student's activities and achievements through newspaper, radio, T.V., or other media.
   d. Area vocational schools should invite area high school counselors in for acquaintance and orientation to their school, personnel, and curricula.
   e. Area vocational schools should provide a campus career day inviting high school students, agriculture instructors, parents, counselors, and administrators.
6. High school agriculture instructors and guidance personnel should develop a program to identify prospective students with an interest in agriculture.
   a. Eighth grade exploratory program or other orientation program should be conducted to identify students with an interest in agriculture.
   b. Agriculture instructors should maintain personal files on all students, recognizing the legal implications.
   c. Acquaint parents and other adults with the agriculture program through activities such as adult programs, open house, parent nights and printed materials.
7. Agriculture instructors should suggest ideas and activities related to agricultural career awareness and orientation to elementary school teachers in their district.
8. Iowa State University should organize a travel course for high school agriculture teachers that would include visits to Iowa area vocational schools so they can become better acquainted with area school programs.
9. Community resources and agricultural activities should be utilized to develop interest in agriculture among young people.

IV. COORDINATION OF LEADERSHIP, EMPLOYMENT EXPERIENCE, AND EMPLOYMENT PLACEMENT ACTIVITIES

A. Challenges and Situations Identified

1. The placement of students for employment experiences needs to be coordinated.

2. The employment placement of graduates should be communicated.
3. High school graduates attending area vocational schools should have the opportunity to continue to develop their leadership skills.

B. Possible Actions Steps

1. Instructors/coordinators of the agricultural employment experience programs should identify businesses that may be potential training stations for both area vocational school and high school students, then decide if the business could best meet the needs of an area vocational school student or a high school student, or both.
2. When a student is to be placed in a business for employment experience, other teacher coordinators who may also be using the business for employment experience should be informed of such placement.
3. When a high school student and an area school student are to be placed in the same business for employment experience, the employer or supervisor should recognize that the students are not in competition with one another, their education and experience may differ, and that their assigned responsibilities in the business may vary. The students should also recognize that the responsibilities of another student-employee in the business may vary from their own responsibilities.
4. The head of the area vocational school agriculture department should inform the appropriate high school agriculture teachers about the employment placement of their former student(s). The teachers should also be informed of the employment placement of an area vocational school agriculture graduate in their communities. Such graduates could serve as a resource person in a high school class and be a productive alumni for the area vocational school.
5. Area vocational school agriculture instructors should encourage their students to maintain their membership in their high school FFA chapter and to participate in FFA activities when possible.
6. Area vocational school and high school instructors should provide joint advise, encouragement, and support to their former and present students who are or should be candidates for district, state, and national FFA awards.
7. Major area vocational school agriculture club activities should be communicated to high school teachers. Area vocational school leadership activities should be planned to build upon the FFA experiences of students.

V. PROGRAM ENTRANCE AND EXIT

A. Challenges and Situations Identified

1. The knowledge of incoming students needs to be assessed and educational experiences planned accordingly.
2. Programs need to be organized to allow for variable entry and exit of students.
3. Arrangements need to be made for advanced and special needs students.

B. Possible Action Steps

1. Area vocational schools shall determine the level of knowledge and skills students have when they enter.
   a. Use a questionnaire asking the student's background. The questions asked would be designed to give the following information:
      (1) Jobs held
      (2) Chronological listing of where they lived: city, town, rural, farm (include size and enterprises)
      (3) Years of vocational-agriculture and 4-H completed
      (4) Description of supervised occupational experiences
      (5) 4-H projects
      (6) Leadership activities in 4-H, FFA, other high school organizations, and other organizations
      (7) Present employment status
   b. Student's basic math, reading, and writing skills should be evaluated.
   c. Area vocational schools should develop a combination written and skill test-out procedure for introductory courses that may duplicate previous experiences.
   d. Students competency level should be continually evaluated through their performance in area vocational school courses and conferences with their faculty advisors.
2. Students should be granted area vocational school course credit for knowledge and skills possessed as determined by the procedures outlined in 1c above.
   a. Student's alternatives when passing out of course may include the following:
      (1) Have released time during period course is offered
      (2) Allow student to take an advanced course
      (3) Encourage student to take elective courses
      (4) Allow student to start later
      (5) Student take independent study program
3. High schools and area schools cooperate to provide an educational program in agriculture for students with special needs, utilizing funds provided by state and federal agencies.

GENERAL RECOMMENDATIONS

1. "Articulation in Agricultural Education" should be the theme of the 1976 Summer State Agricultural Education Conference.
2. FFA, IVATA, and Vo-Ag Districts should be changed to more closely conform to area vocational school and area educational agency districts. Area vocational schools are legislated and other districts are not.
3. An articulation meeting should be planned and conducted involving personnel concerned with the total field of agricultural education at the state administrative level.
4. Follow-up workshop be conducted at ISU to study the statewide articulation concerns and action recommendations and prepare a full report for annual conference.
5. Continue with joint annual agricultural education instructors conference.
6. Guidelines of agriculture task force should be attached to these guidelines.

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Between Secondary and Postsecondary School
July 20-25, 1975
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APPENDIX B

Questionnaire

SURVEY OF ACTIVITIES FOR ARTICULATION
1976 Iowa Agricultural/Agribusiness Education Conference

The purpose of this survey is to identify possible activities which may enhance articulation between high school and area school agriculture programs. You are requested to respond to each statement and question included. The information which you provide will remain confidential and responses will be reported only in group summary form.

PART I

Directions: Please respond to each of the following items related to articulation between high school and area school agriculture programs. In the Importance Rating column, indicate how important you feel the activity is in promoting articulation. In the Level of Implementation column, indicate the extent you feel the activity has been implemented within your area school district. Please use the following scale for each item.

1	2	3	4	5	6	7	8	9
Low				Average				High

Activity	Importance Rating	Level of Implementation
Example: Conduct contests at area schools for high school students.	6	3
1. Exchange program and curricula information.	_____	_____
2. Use newsletters to keep informed of high school and area school activities.	_____	_____
3. Summarize competencies needed by students to enter the job market.	_____	_____
4. Utilize planned procedures to identify prospective students.	_____	_____
5. Provide for individual and group guidance that includes students, parents, and guidance personnel.	_____	_____
6. Prepare comprehensive display of area school programs.	_____	_____
7. Conduct articulation meetings on area school district basis.	_____	_____

(over)

Activity	Importance Rating	Level of Implementation
8. Request DPI to provide major role in promoting articulation.	_____	_____
9. Use basic core curriculum for all high school agriculture programs.	_____	_____
10. Communicate major club activities of area schools to high school instructors.	_____	_____
11. Utilize area school specialists in secondary agriculture programs.	_____	_____
12. Build students' postsecondary employment experiences upon high school employment experiences.	_____	_____
13. Use Iowa curriculum guides to identify content to be taught in secondary and area school programs.	_____	_____
14. Inform high school instructors about placement and employment of former vo-ag students.	_____	_____
15. Build area school leadership activities upon FFA experiences of students.	_____	_____
16. Maintain professional standards by using certification requirements for high school and area school instructors.	_____	_____
17. Inform other instructor(s) in the community where students are placed for employment experience.	_____	_____
18. Determine level of knowledge and skills students have when they enter the area school.	_____	_____
19. Develop an advanced curriculum that is flexible to allow for variations among students.	_____	_____
20. Communicate to all instructors any changes in procedures for teacher certification.	_____	_____
21. Develop a communication procedure with local school counselors.	_____	_____
22. Become familiar with agricultural career clusters, career opportunities and employment possibilities.	_____	_____

Activity	Importance Rating	Level of Implementation
23. Develop a program to identify prospective students with interest in agriculture.	_____	_____
24. Grant area school entry credit for knowledge and skills assessed.	_____	_____
25. Conduct high school exploratory programs by area schools.	_____	_____
26. Identify each student's career objectives and design student's program accordingly.	_____	_____
27. Include an agricultural career unit in the instructional program.	_____	_____
28. Provide educational programs for students with special needs.	_____	_____
29. Determine educational needs through community survey and other available information.	_____	_____
30. Work jointly to identify businesses for potential training stations.	_____	_____
31. Utilize cooperative experience programs to expand learning experiences of student.	_____	_____
32. Provide broad high school agriculture program to inform students of careers available.	_____	_____
33. Revise curriculum periodically to keep current with changing technology.	_____	_____
34. Provide basic and specialized instruction so student may exit at any point in a program.	_____	_____
35. Utilize vo-ag instructors to help evaluate and recommend directions in area school programs.	_____	_____
36. Work jointly in providing adult education.	_____	_____
37. Invite vo-ag instructors and counselors to visit area school programs.	_____	_____
38. Conduct social event for secondary and postsecondary agriculture instructors.	_____	_____

(over)

Activity	Importance Rating	Level of Implementation
39. Send pertinent information to student's former vo-ag instructor.	_____	_____
40. Conduct area meetings for administrators, counselors, board members and agriculture instructors concerning high school and area school programs.	_____	_____
41. Utilize area school students or graduates to inform vo-ag students of programs offered at area schools.	_____	_____
42. Define and communicate the role of high school and area school programs.	_____	_____
43. Provide inservice education for high school teachers by area school instructors.	_____	_____
44. Build student's postsecondary production agriculture occupational experience upon high school occupational experiences.	_____	_____
45. Teach general exploratory agriculture at high school level and preparatory agriculture at the area school.	_____	_____

PART II

Directions: Please answer each question. Where there are brackets, mark an "x" by the response which best describes your situation. Where a line is provided, write your response.

1. What is the name of your Area School?_____

2. What is your position?
   ( ) High school instructor and/or department head
   ( ) Area school instructor and/or program coordinator
   ( ) Area school department head or chairman

3. How many years have you taught in your current position? _____

4. What is your highest educational degree?
   ( ) High school diploma or certificate
   ( ) Associate degree
   ( ) Bachelor's degree
   ( ) Master's degree
   ( ) Ph.D. degree

5. Years of teaching experience in secondary vocational agriculture? _____

6. Years of teaching experience in postsecondary area schools? _____

7. Years of employment experience in farming, business, and industry related to agriculture? _____